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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,498	12/12/2003	Alexei A. Erchak	16459-013001	1871
26161	7590	10/14/2005	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			LOUIE, WAI SING	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/735,498	ERCHAK, ALEXEI A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Wai-Sing Louie	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/05, 3/05, 1/05, 10/</u>   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claims 1 and 9, it is unclear what is an “ideal lattice constant” or how to create an “ideal lattice constant”.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9, 13, 15-20, and 25-41 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-90 of U.S. Patent No.

6,831,302. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

With regard to claims 1, 9, US 6,831,302 discloses a light-emitting device comprising:

- A multilayer stack of materials including a light-generating region and a first layer (n-doped material) supported by the light-generating region (claims 1 and 2), where:
  - A surface of the first layer is configured so that light generated by the light-generating region can emerge from the light-emitting device via the surface of the first layer (claim 1);
  - The surface of the first layer has a dielectric function that varies spatially according to a pattern (claim 1);
  - The pattern has an ideal lattice constant and a detuning parameter with a value greater than zero (claim 15);
  - The light-emitting device is configured so that, when light generated by the light-generating region emerges from the light-emitting device via the surface of the first layer, the light can emerge from the light-emitting system (claim 1).

With regard to claims 2-8, US 6,831,302 does not disclose the light-emitting system is a projector, rear projection, lighting system. However, the usage of the device is not in the scope of device prosecution, where the usage of device does not carry any patentable weight.

With regard to claim 13, US 6,831,302 discloses the limitations in claim 20.

With regard to claim 15, US 6,831,302 discloses the limitations in claim 21.

With regard to claims 16-17, in addition to the limitations disclosed in claim 1 above, US 6,831,302 also discloses:

- The surface has a dielectric function that varies spatially according to a nonperiodic pattern or complex periodic pattern (claim 15).

With regard to claim 18, in addition to the limitations disclosed in claim 1 above, US 6,831,302 also discloses:

- A layer of reflective material that is capable of reflecting at least 50% of light generated by the light generating region (claim 1).

With regard to claim 19, in addition to the limitations disclosed in claim 1 above, US 6,831,302 also discloses:

- The pattern does not extend beyond the first layer (claim 10).

With regard to claim 20, in addition to the limitations disclosed in claim 1 above, US 6,831,302 also discloses:

- The material having an index of refraction less than 1.5 (claim 1).

With regard to claim 25, in addition to the limitations disclosed in claim 1 above, US 6,831,302 also discloses:

- The surface of the first layer has a dielectric function that varies spatially as a pattern, and at least 45% of a total amount of layer generated by the light-generating region (claim 1).

With regard to claims 26-28, in addition to the limitations disclosed in claim 1 above, US 6,831,302 also discloses:

- US 6,831,302 does not disclose an edge, which is at least one millimeter long.

Since the applicant has not established the criticality of the length stated and since these lengths are in common use in similar devices in the art, it would have been obvious to one of ordinary skill in the art to use these values in the device. Where patentability is said to be based upon particular chosen dimension or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

With regard to claims 29-41, US 6,831,302 discloses the first layer has features with a size of less than  $\lambda/5$  (claim 45).

Claims 10-12 and 21-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-90 of U.S. Patent No. 6,831,302 in view of Taskar et al. (US Pub 2003/0209714).

With regard to claims 10-11, US 6,831,302 does not disclose the plurality of light-emitting diodes are configured as an array and the system includes a plurality of array of light-emitting devices. However, Taskar et al. disclose an array of light-emitting diodes (Taskar fig. 6) and plurality of array of light-emitting diodes to form a display Taskar paragraph [0002]). Taskar et al. teach a package of LEDs emits high brightness and forms directed area of lighting (Taskar paragraph [0002]). Therefore, it would have been obvious to one of ordinary skill in the art to

modify the device of US 6,831,302 with the teaching of Taskar et al. to form an array or system of LEDs in order to emit high brightness and form directed area of lighting.

With regard to claim 12, US 6,831,302 modified by Taskar et al. would disclose a housing with a surface (Taskar fig. 6).

With regard to claims 21-24, in addition to the limitations disclosed in claim 1 above, US 6,831,302 modified by Taskar et al. also discloses:

- A phosphor material supported by the surface of the first layer (Taskar paragraph [0079]).
- The light that emerges from the phosphor layer is substantially white light (Taskar paragraph [0079]).
- A first sheet transparent material (Taskar - epoxy layer 99).
- A second sheet of phosphor material (Taskar paragraph [0079]).
- The surface of the first layer 107 is collimated in distribution of light (Taskar paragraph [0084] and fig. 7).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

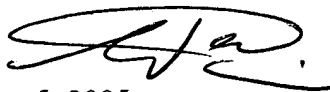
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2814

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wsl

October 5, 2005.

A handwritten signature in black ink, appearing to be 'Wsl', written over the typed name 'Wsl'.